

• COLORADO RIVER • AQUEDUCT NEWS

THE METROPOLITAN WATER DISTRICT

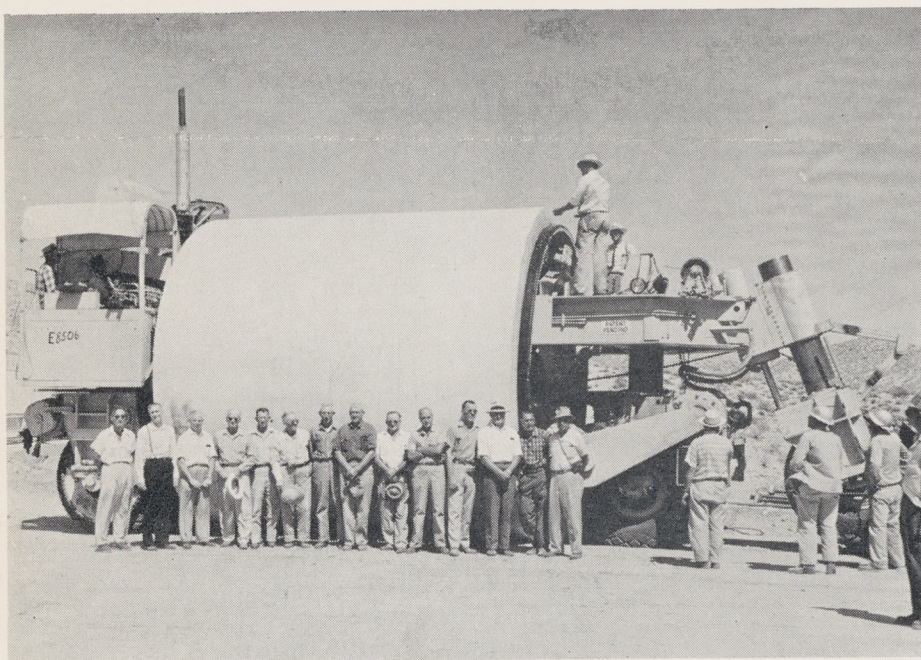


OF SOUTHERN CALIFORNIA

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A large number of District employees and American Pipe and Construction personnel are shown in front of one of the 62 ton pipe sections being used in the construction of the second barrel of siphons on the main Colorado River Aqueduct. The huge machine inside the pipe section, which is nearly 16 feet in outside diameter, is called a "Pipemobile." This vehicle is driven into and partially through a pipe section. A front set of wheels is then lowered and the pipe is picked up and driven down into the trench for final installation.

First Huge Section of Pipe for the Second Barrel of 47 Siphons on Main Aqueduct Installed

A major step in a \$200 million expansion program to bring its full share of Colorado River water to Southern California was taken this month with the placing of the first section of huge pipe near Desert Hot Springs for one of 47 inverted siphons along the Colorado River Aqueduct, it was announced by Robert B. Diemer, General Manager and Chief Engineer of the Metropolitan Water District.

"This is one of the largest engineering, pipe fabrication and installation projects ever to be undertaken in Southern California," Mr. Diemer declared.

"Each of the 16-foot long pipe sections weighs between 62 and 68 tons and has an outside diameter of nearly

16 feet. Four thousand such pipe sections will be used on the job," he pointed out.

"The work consists of the fabrication and installation of 47 inverted siphons along a 183-mile segment of the aqueduct to help bring the water supply line to its full planned delivery capacity of more than one billion gallons of water a day. The aqueduct is now delivering approximately half that amount to thirsty Southern California," Mr. Diemer said.

Mr. Diemer pointed out that in the initial construction of the aqueduct, with a few exceptions, the siphons, which carry the water across drainage chan-

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District Presents Its Case In U.S. Supreme Court Suit

The spotlight in the United States Supreme Court case of Arizona vs. California, largest water and power suit in history, shifted Friday, July 5, from agricultural areas of Southern California to the vast centers of population, commerce and industry.

The Metropolitan Water District of Southern California, comprising 79 cities and containing a population of more than six and one-half million, opened its fight to preserve its full legal entitlement of Colorado River water. Three other defendants are named in the case from the Metropolitan area, and evidence also will be presented in their behalf. They are the Los Angeles Department of Water and Power, and the City and County of San Diego.

In making the opening address for the District, General Counsel James H. Howard told the court:

"Compared with uses of water by California defendants engaged in agriculture, the amount of Colorado River water involved is relatively small, but when we consider the problem in the light of the number of people affected, the assessed valuations involved, and the impact on human life, we are talking about the greatest single interest in the case.

"We are here to defend and preserve the right to the use of water, upon which we have relied for the past quarter century, against an attempt to take such water for projects in Arizona not yet authorized."

Hearings on the case are being held in San Francisco before Simon H. Rifkind, appointed by the court as a special master to take evidence and recommend findings in the various phases of the litigation. Arizona brought the suit against California in 1952, seeking to quiet title to a large amount of Colorado River water which Arizona contends California has no legal right to use. The amount

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Lower Feeder Now Delivering More Water to Orange County

An additional supply of softened and filtered Colorado River water began pouring into Orange County cities and areas early in July, it was announced by Robert B. Diemer, General Manager and Chief Engineer of the Metropolitan Water District.

The new water supply is being provided through what is called the Lower Feeder of the Metropolitan Water District's distribution system that was completed and placed in operation July 1, 1957. This line will increase by 50% the amount of softened and filtered water available to the Orange County cities and areas.

"During the hot summer days these Orange County areas are using much more water than they ordinarily require. This has resulted in a critical situation because the Orange County coastal cities and areas have little or no surface storage and some of them have no additional wells which they can call upon to help peak demands," said Mr. Diemer.

"In the cities of Anaheim, Fullerton, Santa Ana and Buena Park the extraordinary peak demands for water during the hot days have been met by bringing into operation local wells that provide valuable standby service.

"It is possible for these interior cities to take large quantities of water from these local wells because the Metropolitan Water District has been delivering a large volume of natural Colorado River water to the Santa Ana River and other spreading basins to help replenish the underground supplies.

"Seventeen miles of new pipe line were put into service on July 1 to supplement the softened water supply to Orange County," Mr. Diemer said. "Twelve miles of the new line is 78 inches in diameter and runs east from Garfield and Southern Avenue in South Gate to the Orange County line at Imperial Highway. Five miles of the new



Director Floyd Fischer is named Mayor of Beverly Hills.

Director Floyd Fischer Named Mayor of Beverly Hills

Director Floyd Fischer, who represents Beverly Hills on the District Board of Directors, has been elected Mayor of that city, succeeding David Tannenbaum. Mr. Fischer has been a member of the Beverly Hills City Council for nine years and was elected Mayor by his colleagues on July 30.

In addition to serving on the District Board, Mr. Fischer is a director of the County Sanitation District and of the Los Angeles County Division of the League of California Cities.

He has been a resident of Beverly Hills for 23 years and has been serving on the District Board since 1951. He is a member of the Organization and Personnel Committee and of the Finance and Insurance Committee.

line is 54 inches in diameter and runs south from Imperial Highway to the existing West Orange County Feeder in Dale Street at the Santa Ana Freeway.

"Since the first of the year the Orange County Municipal Water District has been supplied a total of 54,000 acre-feet of unsoftened water for storage and spreading purposes. Other unsoftened water deliveries made by the Metropolitan Water District to other areas during the same period amounted to 86,000 acre-feet.

"The Orange County Feeder, which prior to July 1 was the sole means of supplying softened water to Orange County at a rate of 60 cubic feet per second, has been operating at full capacity since May 1. Softened water deliv-

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For the RECORD

(The following items are noted from the report of General Manager and Chief Engineer Robert B. Diemer, filed July, 1957 covering District operations for June, 1957.)

Colorado River—The water surface of Lake Mead rose 41.7 feet to elevation 1151.01 and usable storage increased 4,400,000 acre-feet to 17,600,000 acre-feet. The average rate of discharge from Hoover Dam for June was 14,100 cubic feet per second as compared with 12,440 in May and 13,070 cubic feet per second in June 1956.

Pumping and Power—Water pumped at Hayfield for delivery during June was 56,281 acre-feet as compared with 34,950 acre-feet a year ago. Pumping was continuous on a five-pump basis, except for 43 hours 9 minutes when pumping was reduced to a four-pump basis during maintenance at Eagle Mountain and Hayfield. The District's share of Parker energy was 26,375,981 kwhrs, all of which was used in the District system. Edison interchange energy delivered to the District was 15,019,200 kwhrs. Peak delivery to and from Edison Company was 88,000 kw and 135,000 kw, respectively.

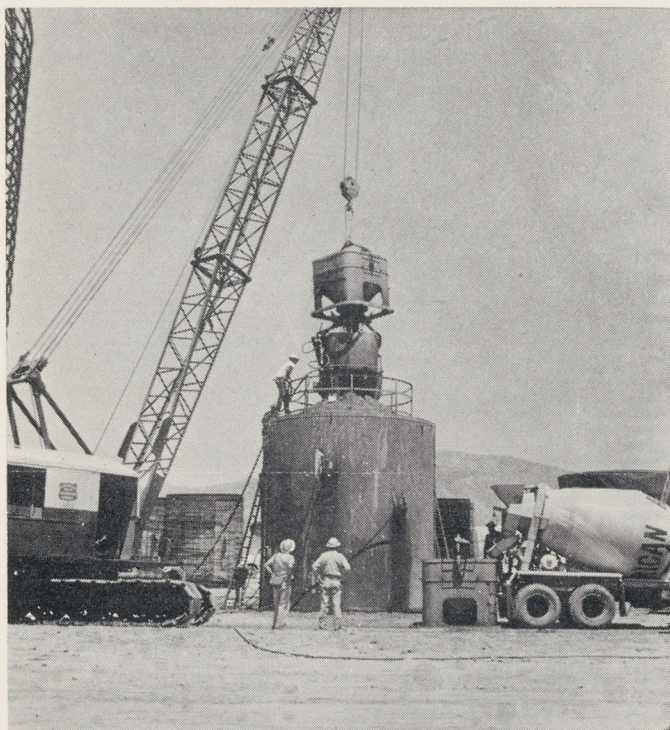
Weymouth Softening and Filtration Plant—Colorado River water was softened from 372 to 198 ppm of hardness at an average rate of 391 cfs during June. The daily rate of flow varied from 242 to 489 cfs. The total volume of water treated during June 2 was 22,981 acre-feet as compared with 19,029 acre-feet in June last year, an increase of 20.8 percent. On July 1, seventeen miles of new pipeline were placed in service to supplement the 60 cfs capacity Orange County Feeder in supplying softened water to the constituent areas in Orange County.

Construction—Progress on construction work on the distribution system was as follows: Schedules 79SC and 80SC (Lower Feeder) the contracts are 97 percent complete; Schedules 56SC and 57SC (Middle Feeder) the contract is 63 percent complete; Schedules 58SC and 59SC (Middle Feeder) the contract is 58 percent complete; and on Schedule 59A (Middle Feeder) the contract is 63 percent complete.

Pumping Plant Expansion—All materials and equipment for pumping unit 6 have been delivered with the exception of a few minor items.

Purchasing—Total expenditures covered by 469 purchase orders and 6 agreements were approximately \$303,761.

WORK UNDER WAY ON SECOND BARREL OF SIPHONS



The American Pipe and Construction Company, contractor for manufacturing and installing the second barrel of the siphons, has established a field plant near Desert Hot Springs for the final steps in fabricating the huge pipe sections. Here concrete is being poured into forms already containing the steel reinforcement cages and cylinders.



After the pipe sections, which weigh from 62 to 68 tons, are transported by gigantic trucks to near the installation site, a huge "Pipemobile" is used to pick up the pipe and carry it down into the trench. This unique machine moves forward, backward or crabwise, climbs 30 degree slopes, centers and actually telescopes the pipe section into the section previously placed.



The "Pipemobile" is shown in action with the first of 4000 pipe sections which will be used in 47 siphons along a 183-mile segment of the main aqueduct to help bring the aqueduct to its full capacity of more than one billion gallons of water a day for Southern California. This is part of the District's \$200 million expansion program.



District and American Pipe and Construction Company officials and employees are shown standing inside the first pipe section to be installed on the siphon job near Desert Hot Springs. Left to right are O. M. "Chick" Hooper, Project Manager for American, and District representatives Owen Wilson, Al Preston, Robert Skinner, William F. "Mac" McCleary, Henry J. "Hank" Mills and Larry Green.



District Controller A. W. "Mac" McKinlay signs the first of \$15,000,000 in Waterworks Bonds, Series One, which were sold to the Harris Trust and Savings Bank, Chicago, and Bankers Trust Company. These are the first short term bonds to be sold by the District under the provisions of Proposition "W". Looking on, left to right, are William A. Parsons of the Legal Division, and Don A. Yapp and Laureate White, both of the Controller's office.

Second Barrel of Siphons

(Continued from Page One)

nels, canyons, desert washes and other depressions, were designed for a second barrel, the second barrel being deferred for future construction. Other portions of the aqueduct, including 92 miles of tunnels, 63 miles of concrete-lined canals and 55 miles of concrete conduits, were built to their ultimate capacity in the initial development which was completed in 1941.

"In 1952 the Metropolitan Water District embarked on a program to bring all of its facilities to their ultimate capacity. The District is now engaged in a 200 million dollar expansion program which includes enlarging the distribution system; the addition of six more pumps at each of the five pumping stations on the main aqueduct (two of these six are now installed); increasing the capacity of Lake Mathews, the terminal reservoir of the main aqueduct near Riverside; enlarging the softening and filtration plant near La Verne; a second aqueduct to San Diego; and the construction of the aforementioned 47 siphons," Mr. Diemer said.

The pipe fabrication and installation work on the second barrel of the siphons is being performed by the American Pipe and Construction Company of South Gate, California under two contracts totaling nearly \$16 million.

All siphons in the first barrel of the aqueduct, with one exception, were constructed of cast-in-place reinforced con-

crete pipe. This exception was the "Little Morongo Siphon" and it was constructed of precast pipe by the American Pipe and Construction Company, the same organization which is now helping to bring the second barrel of the siphons to full capacity. In the second barrel all 47 siphons will be constructed of precast, reinforced concrete pipe. More than 12 miles of pipe will be placed on the job.

The size of the pipe in the first barrel of the two-barrel segments varies from 11 feet 5 inches to 12 feet 9 inches inside diameter according to location and operating conditions. To bring the aqueduct to its ultimate capacity of 1,800 cubic feet per second, the second barrel of the siphons will have an inside diameter of 13 feet 6 inches for a portion of the siphons and 13 feet for the remainder.

The pipe sections are being fabricated in 16-foot lengths weighing between 62 and 68 tons each. They have an outside diameter of nearly 16 feet. This is the heaviest pipe ever manufactured. The American Pipe and Construction Company has designed and built a special machine to handle the pipe. This machine, called a "Pipemobile", is driven into and partially through a pipe section. A front set of wheels is then lowered and the pipe is picked up and driven down into the trench for final installation.

The Southern California Division shops of American have built the special-

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\$15,000,000 in Bonds Sold By District to Banking Firm

The Board of Directors of the Metropolitan Water District has authorized the sale of \$15,000,000 in Waterworks Bonds, Series One, to the Harris Trust and Savings Bank, Chicago, and Bankers Trust Company, Joint Managers and Associates at interest rates of 3 per cent and $3\frac{1}{4}$ per cent for an average of 3.203733 per cent.

The successful bid, which was one of four opened by the District Board at a public session, also offered a premium of \$4,485, it was announced by Board Chairman Joseph Jensen.

The \$15 million bond issue consists of 15,000 coupon bonds in the denomination of \$1,000 each, dated August 1, 1957. They will mature in consecutive numerical order in the amount of \$1,250,000 on August 1 of each year of the years 1958 to 1969 inclusive, Chairman Jensen said.

"These are the first short-term bonds to be sold by the Metropolitan Water District under the provisions of Proposition "W" which was authorized by the voters at the June 5, 1956 election," Mr. Jensen pointed out.

The money derived from the sale of the bonds will be used to help finance the District's \$200 million expansion program to bring its Colorado River Aqueduct to its full, ultimate capacity of one billion gallons of water a day for Southern California, the District official said. Additional issues of a similar nature will be forthcoming, he declared.

Mr. Jensen emphasized that while these bonds are General Obligation Bonds of the District, supported by all its resources, the interest and the principal of the bonds will be repaid primarily from revenues and annexation fees which are pledged to the District and will be paid into its treasury during the next 25 to 30 years. Because of these anticipated revenues no increase in taxes for the financing of these bonds is contemplated.

The Metropolitan Water District's Colorado River Aqueduct extends from its intake above Parker Dam across the entire State of California and serves 79 incorporated cities and large unincorporated areas within the boundaries of the District.

The present area of the District is approximately 3,000 square miles containing a population of more than 6,500,000 and having an assessed valuation of about \$10,700,000,000.

NEWS FROM FIELD AND OFFICE



Alan Patten, Deputy General Counsel, who retired from the District effective August 1 after more than 25 years of service, is shown with a number of his friends and associates who called to wish him well in his retirement. Seated, left to right, are Ruth Thiers, Alan, and Elvira Meyer. Standing, left to right, are Paulina Jacobs, Nedra Datwyler, Marian Crews, Charles C. Cooper, Jr., William A. Parsons, Robert B. Diemer, A. L. (Andy) Gram, Harris V. (Harry) Crawshaw, Robert A. Skinner, Don J. Kinsey and John M. Davenport. His many District friends presented Alan with a beautiful gold wrist watch and other gifts as tokens of their esteem.

Second Barrel

(Continued from Page Four)

ized equipment for fabricating the gigantic reinforcing cages and steel cylinders, as well as the forms for pouring the concrete and all the special equipment for handling and transporting these enormous pipe sections.

Because of the size of the pipe and the distances involved, the company has erected a semi-portable plant in the desert to produce the pipe. It is now located near Desert Hot Springs and later will be moved to Freda Siding.

The reinforcement cages and cylinders for the entire job are being fabricated at American's Etiwanda fabrication plant and shipped by rail to the locations of the pouring plants.

Pipe laying crews will complete the installation of all the westerly siphons by the end of February, 1958. The crews will then move to the second location and complete the installation of all the siphons by December 31, 1958, the completion time required by the project specifications. These siphons vary in length from the shortest, which is only 73 feet long, to the longest, which is 15,400 feet in length.

The Metropolitan Water District's over-all expansion program is scheduled for completion in 1960.

Supreme Court Suit

(Continued from Page One)

sought by Arizona is about 30 per cent of California's Colorado River supply.

California claims title of 5,362,000 acre-feet of river water under appropriate rights and contracts with the Federal Government. Of this amount, the District holds title to 1,212,000 acre-feet. Within a very few years every gallon of this amount will be in use, being brought to the coastal plain through the Colorado River Aqueduct.

"The aqueduct," said Mr. Howard, "has been described by the American Society of Civil Engineers as one of the seven engineering wonders of the United States. Relying on our contracts for Colorado River water with the United States, and on our appropriation under State law, the District constructed this great and costly works, and the District has developed an economy in reliance upon such rights.

"There is no Federal money invested in the aqueduct or distributing system. It was constructed at local expense, from the sale of District bonds and from taxation.

"The assessed valuation within the Metropolitan Water District now exceeds 44 per cent of the entire assessed valuation of the entire State of California."

Jack C. Williams, Jr., son of Field Secretary Jack Williams, is serving a hitch in the U.S. Navy. He is presently stationed at the San Diego Naval Training Station and will be there until September 22. From there he will be sent to Bremerton Naval Base in Washington where he will join the crew of the Aircraft Carrier Midway, which is being recommissioned and will make a cruise around the world.

* * *

Don Murphy, Junior Draftsman in the Los Angeles office, was married to the former Janice Eilene Gehley on July 2 in the Huntington Methodist Church. Following a honeymoon at Escondido, the couple are making their home in Bell. Don's friends in the District presented him with a clock radio and a wallet.

* * *

Estelle McGee, Assistant Purchasing Agent, still has stars in her eyes when she talks about her recent vacation to Hawaii. She left Los Angeles by air on June 10 with a party from the Department of Water and Power and flew directly to Waikiki on Oahu, where they stayed at the Edgewater Hotel. Estelle says she had a wonderful time sight-seeing, attending a luau and nightclubbing. By special arrangement the party toured Pearl Harbor aboard a Navy Launch. They also visited the cemetery where the famous war correspondent, Ernie Pyle, is buried.

Water for Orange County

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eries to the Orange County constituent areas since the first of the year amount to 14,000 acre-feet. All other agencies of the Metropolitan Water District were supplied 66,000 acre-feet during this same period.

"The new facilities will permit deliveries of softened water at a rate of 50% more than has previously been possible. Water will be supplied to the new facilities by way of the District's 1,500 acre-foot Garvey Reservoir in Monterey Park, through existing lines that serve the harbor area, to South Gate and thence through the new lines to Orange County users," Mr. Diemer concluded.

The increase in deliveries of natural water to Orange County over previous years was made possible when the Metropolitan Water District recently placed in operation a fifth pump at each of its five pumping stations.

NEWS FROM FIELD AND OFFICE

Johnny A. Johnson, Utility Man in the Lake Mathews Enlargement Soil Laboratory, and his wife, Betty Jean, became parents for the first time with the arrival of John Allen at Riverside Community Hospital on the morning of July 8. The young man weighed 7 pounds, 8 ounces upon arrival.

* * *

On July 14, the annual District picnic in San Dimas Foothill Park was enjoyed by approximately 170 District employees and guests. In addition to the excellent pot-luck dishes brought by each family and the coffee, lemonade, and ice cream provided by the host group from the Softening Plant, the highlights of the gala affair were the games for the young children and the ball game for the dads and older boys.

The dads and granddads had good reason to be proud of the performance of the youngsters on the diamond, as their fielding and hitting was outstanding. Although the play of all the boys was worthy of praise, two whose performances will be particularly well remembered are Danny Milts, son of Ray Milts, Maintenance Man at Lake Mathews, who performed like a veteran big leaguer at second base, and Mike Parker, grandson of General Manager and Chief Engineer Robert B. Diemer, who smashed a three-run homer to help his team win the game.

Sam Thomason, Lineman, and his wife, Betty, became grandparents for the third time on July 26 when their daughter, Patricia Jones, gave birth to a baby girl at the Good Samaritan Hospital. The young lady weighed 8 pounds, 14 ounces and has been named Judi Jo. Patricia herself is an "aqueduct baby." The father, Robert Jones, is studying electrical engineering at Los Angeles City College and Patricia has been an accounting major at Woodbury College. She plans to return to her studies when Judi Jo gets a little older.

* * *

The District employees' entry in the La Verne City Men's Softball League has been having some very rough sledding in recent weeks. After winning the League opener by a score of 5 to 4, they dropped the next games by scores of 8 to 0, 3 to 7, and 3 to 8. On July 24 they squeezed out an 11 to 11 tie, but the last outing on July 31 saw them go down to defeat again, 7 to 1. Manager Frank Dennis says the team positively will not move to Los Angeles.

* * *

Dave Smith, Chemist at Lake Mathews became a grandfather for the first time with the arrival of Daniel Allen Lott, who was born to Dave's daughter, Valerie, and her husband, John D. Lott, on July 4. The baby boy made his appearance at Loma Linda Hospital weighing 8 pounds, 7 $\frac{3}{4}$ ounces.



Dorothy Goddard—25 Years of Service.

Dorothy A. Goddard became eligible for her 25-year service pin on June 8, 1957. She started to work for the District as a Stenographer in 1931 as a member of the District organization carrying forward an educational campaign in support of the \$220 million bond issue approved by the voters on September 29, 1931. From December, 1931 to July, 1941 she performed stenographic and secretarial services in the Miscellaneous Activities Division and for some time was at the District's Information Desk.

In July 1941 she resigned to accept another position and in June 1942 was re-employed by the District as Stenographer-Secretary in the Miscellaneous Activities Division. In August, 1951 she became Secretary and in July, 1955 Public Relations Secretary, the position which she now fills.

* * *

Harry G. Hawley, long-time District employee, who retired on July 31, 1954, passed away July 22 after a lingering illness. He was 73 years of age.

Harry was one of the original "aqueducters", having worked on the early surveys and design work back in 1926. He was transferred to the District from the Department of Water and Power, and worked until 1940. He rejoined the district in 1948 and was working in the office of the Assistant Chief Engineer at the time of his retirement. Funeral services were held July 25 at Inglewood Park Cemetery. A large number of District employees attended. He is survived by his wife, Ann, and two married daughters.



District youngsters (and their folks, too) had a bang-up time playing a variety of games at the District picnic in San Dimas Foothills Park on July 14. It wasn't reported who finally won the spirited game of "The Flying Dutchman" but it was reported that the fathers gave out first.